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ABSTRACT

Using a critical-career events framework to describe the socialization process in academe, a model was developed which relates how the experiencing of critical-career events affects individuals' judgments of their research self-efficacy which, in turn, affects their scholarly productivity. A sample of 206 full-time associate professors from 7 different schools participated in the study and 126 cases were eventually analyzed. The study found inconclusive evidence that critical-career events or self-esteem directly influenced the development of self-efficacy or achievement; however, the following relationships were found to be significant to self-esteem and self-efficacy: (1) mentoring; (2) growth opportunities; and (3) an award system; both growth opportunities and self-efficacy were significant to achievement. It is concluded that the study led to the development of inferences and might ultimately lead to interventions designed to enhance the education and scholastic career development of tomorrow's leaders. (GLR)

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THE EFFECTS OF CRITICAL CAREER EVENTS ON SELF-EFFICACY AND SCHOLARLY ACHIEVEMENT

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THE EFFECTS OF CRITICAL CAREER EVENTS ON SELF-EFFICACY AND SCHOLARLY ACHIEVEMENT

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ABSTRACT

The purpose of this study is to extend and test a model of faculty socialization. Using a critical-career events framework to describe the socialization process in academe, a model was developed which relates how the experiencing of critical-career events affects individuals' judgments of their research self-efficacy which, in turn, affects their scholarly productivity.

STATEMENT OF THE PROBLEM

Purpose of the Study

Faculty socialization will remain a topic of significant interest as long as colleges and universities are perceived to be a contributing influence to the vitality of our society. By effectively instilling values, norms, and behavioral expectations of the scholarly community, socialization affects the capacity of potential and new faculty members to become scholarly productive. The purpose of this study is to extend and test a model of faculty socialization based on a critical-career events framework.

Numerous theoretical assertions have been made with regard to the probable effects of professional socialization

processes on the development of scholarly careers. Blackburn (1985), in particular, developed an events-driven theory of scholarly career development. According to Blackburn, the degree to which academicians develop scholarly careers is dependent on their having experienced specific critical-career events. In essence, Blackburn proposes an environmentally induced and deterministic model of academic career development. The problem with Blackburn's model is that there are no provisions for the inclusion of psychodynamic variables which arise from an individual's power to generate some degree of self-direction based on his/her cognitive abilities. Thus, the primary purpose of this study is to further test and advance Blackburn's theory by developing a conceptual framework which permits and guides an investigation of the direct effects of an individual's environment on his/her cognitive functioning and behavior.

Rationale

Supporting Blackburn's thesis in a general way, the professional socialization literature suggests that individuals do, in fact, develop a particular cognitive professional orientation due to the occurrences of specific structural and or situational characteristics in the environment which are representative of particular occupations (Wanous and Colella, 1985). However, more specifically supporting Blackburn's hypothesis, a number of studies have concluded that academicians who engage in a

high degree of scholarly activity are likely to have experienced a number of specific critical career events earlier in their careers (Blackburn and Havighurst, 1979; Baldwin and Blackburn, 1981; Lawrence and Blackburn, 1985).

While Blackburn's theory has gained support in the professional socialization literature, and has been tested with regard to the identification and importance of specific career events, the process whereby these events influence scholarly career development is yet to be examined. There is considerable evidence, however, that the gap in Blackburn's theory (and in the work of others who have failed to explain the process of scholarly career development) can be filled by the application of concepts from social learning theory (Bandura, 1977).

According to social learning theory, individuals decide to take one course of action over another due to their having developed particular beliefs (self-efficacy judgments) about their ability to successfully carry out specific tasks. Beliefs in one's potential success, according to Bandura, are based on one having previously experienced either directly or vicariously, particular events associated with rewards or punishments in the environment. It is these beliefs, according to Bandura, that serve to mediate between one's knowledge of his or her environment and one's choice of actions which, in turn, affects one's achievements. Further, Bandura goes on to say

that these beliefs are not static but can be modified based on the consequences of one's actions.

By constructing a model in which the environment is represented by a series of particular critical-career events, as identified by Blackburn, and by asking individuals to specify how successful they feel they would be at accomplishing specific scholarly tasks, as suggested by Bandura, it should be possible to test whether the occurrence of such events are associated with greater feelings of self-efficacy which, in turn, should lead to higher levels of productivity.

In summary, this study proposes to further test and advance Blackburn's theory of scholarly career development by developing a model which permits an investigation of the relative effects of critical career events on self-efficacy and scholarly achievements.

CONCEPTUAL FRAMEWORK

Model

The conceptual model guiding this study is derived from an integration of Blackburn's work on academic career development and Bandura's work on social learning theory. Although Blackburn has identified a number of critical career events which are highly associated with scholarly productivity, the question remains: In what ways do these events affect achievements?

According to social learning theory, environmental experiences, such as critical career events, affect achievements through self-efficacy. However, self-efficacy, itself, can be modified by achievements. Thus, in accordance with social learning theory, a model has been developed in order to investigate the direct effects of critical career events (environmental experiences) on research self-efficacy (cognitive functioning) and scholarly achievements, and the effects between research self-efficacy (cognitive functioning) and scholarly achievements (behavior).

Faculty Socialization. Based on a synthesis of the literature on faculty socialization, it was possible to verify and adapt an already well-developed critical-career events framework of faculty socialization as a basis for the model of this study (Blackburn, 1985). Essentially, seven critical-career event categories were identified and serve as the independent variables. By way of definition, components of the independent variables and examples of the items are briefly described below:

Early Focus: 1) choosing a life-long academic discipline before completing the undergraduate degree (Roe, 1951, 1952; Gustad, 1960; Parsons and Plat, 1968); 2) continuing from undergraduate to graduate studies without a break (Havighurst, et al., 1973; Blackburn and Havighurst, 1979); 3) choosing the professoriate as a

career early (Roe, 1952, 1953, Stecklein and Eckert, 1958; Williams, 1972; Havighurst, et al, 1979; Finkelstein, 1984).

Mentoring: 1) exposure to inspiring professors (Roe, 1953; Parsons and Plat, 1968).

Prestige: 1) prestige of the university from which one received a terminal degree (Hargens and Hagstrom, 1967; Cole and Cole, 1967, 1973; Allison, 1974; Danziner, 1978); 2) prestige of the people with which one worked with early in one's career (Blackburn and Havighurst, 1979; Baldwin and Blackburn, 1981; Queralt, 1982).

Exposure: 1) opportunity to publish early in one's career, i.e., graduate student (Hargens and Hagstrom, 1967; Cole and Cole, 1967; 1973; Danzinger, 1978); 2) being exposed to prestigious persons early in one's career (Reskin, 1979).

Growth Opportunity: 1) attending professional conferences early in one's career (Glueck and Jauch, 1975); 2) the opportunity to take on administrative roles later in one's career (Verroca, 1979).

Employing Environment: 1) degree of difficulty acquiring first position (Clark and Centra, 1982; Baldwin and Blackburn, 1984); 2) being hired temporarily initially (Baldwin and Blackburn, 1981).

Although it is possible to generate a list of what appears to be critical-career events with regard to scholastic development, the knowledge of <u>how</u> the

experiencing of such events affects one's later scholarly productivity remains rather elusive.

Social Learning Theory. While there is no general model that is universally agreed to encompass all causes of human behavior, a general theory of social learning has gained broad support. Social learning theory proposes that direct and vicarious experiences associated with rewards and punishments in one's environment lead to the development of an individual's perception of his or her ability to carry out task-specific functions (Bandura, 1977, 1978, 1979). These beliefs in turn shape an individual's behavior which, in turn, affect one's later achievements (Freedman and Sears, 1965). With regard to behavior, it is posited that self-efficacy is the cognitively based motivating mechanism which serves to mediate between individuals' knowledge of their environment and their perceptions of their ability to carry out some function.

The effects of self-efficacy judgments are many. They influence one's choice of activities, one's choice of environmental settings, the time and effort one is willing to expend in order to meet some goal, and how people tend to react to anticipatory and actual situations. In addition to cognitive functioning, Bandura suggests that self-efficacy is affected by 1) past performance, 2) modeling, 3) verbal persuasion, and 4) emotional arousal. According to social learning theory, environmental experiences, such as critical career events, affect achievements through self-efficacy.

However, self-efficacy, itself, can be modified by achievements. Thus, in accordance with social learning theory, a model was developed in order to investigate the direct effects of critical career events (environmental experiences) on research self-efficacy (cognitive functioning) and scholarly achievements, and the effects between research self-efficacy (cognitive functioning) and scholarly achievements (behavior).

METHODOLOGY

Design

Following the vernacular of Cook and Campbell (1979), the design of this study is classified as correlational. For the purpose of developing causal inferences, the identification of causal processes and/or relationships was attempted based on passive observations as they occurred in the natural setting. Regardless of whether one is referring to causal models, path analysis, or to structural equation models, the essence of the techniques is the same in that estimates of paths and path coefficients are computed on the basis of observational data and are used to assess the strength of theoretically generated relationships or hypotheses.

Sample

Most of the theoretical assertions which have been proposed with regard to the effects of critical-career events have been generated from limited interview responses.

However, in order to test these assertions as part of a model, a larger number of responses is required. Thus, a survey method is most appropriate.

The rank of Associate Professor was targeted over the rank of Assistant Professor in an attempt to alleviate the effects of potential surges in productivity due to pending tenure decisions. Associate Professors were chosen over Full Professors in an attempt to alleviate the potential effects of incorrectly recalling events which may have occurred in the distant past. Four hundred and fifty-six (456) full-time Associate Professors at a single , research institution were asked to participate in this study. Approximately 45% (204) of the invited participants responded. However, in order to determine the effect of doctoral program experiences, only those participants holding a Ph.D. or equivalent professional degree were included in the study. Further in order to strengthen the results of the study, cases in which 20% or more of the data were missing were deleted from the data set; leaving 126 cases for analysis. Seven different schools are represented in this study. The proportion of the participants who returned their questionnaire from each school was representative of the number of associates in each school.

Procedure

Based on a verification of the importance of particular critical-career events identified in an already well-developed critical-career events framework, an instrument

was created and pretested for face validity and clarity. Approximately 40 Associate Professors were drawn for a pretest. Based on the results of the pretest, a revised instrument was developed and distributed. After two weeks, follow-up phone calls were made.

Measures

The measures of the dependent variable, scholarly achievement, chosen for this study are representative of academic scholarly behaviors. Participants were asked, in an open-ended questionnaire, to indicate the number of articles and books they have published, as well as, the number of conference papers they have presented. This portion of the questionnaire was taken from another study in which conditions influencing the career accomplishments of Ph.D.'s were investigated (Clark and Centra, 1982).

The measures of the mediating variable, self-efficacy, were designed to assess participants' beliefs of their ability to carry out specific academic scholarly tasks. Consistent with Bandura's conceptualization of how to assess self-efficacy, participants were asked two types of questions: 1) magnitude items which asked individuals to respond either yes or no to questions of graduating degrees of difficulty (e.g., publish one article/year; three articles/year; etc.); and 2) strength items which ask respondents to indicate their level of certainty of accomplishing each of the magnitude items. This portion of the questionnaire was borrowed from a study in which the

relationship between Type A behavior and academic research productivity was investigated (Taylor, Locke, Lee and Gist, 1984).

The seven event-related independent factors for this study (early focus, mentoring, honors and awards, prestige, exposure, growth opportunities, and employing environment) were derived from an analysis of the events identified by Blackburn (1985). Participants were asked to indicate the occurrences (or the lack thereof) of specific career events relating to each respective factor. Finally, in an attempt to control for the effect of one's overall feelings of self-acceptance, a general measure of self-esteem was included (Rosenberg, 1965).

DATA ANALYSIS AND RESULTS

Analysis

In order to examine the impact of the environment on self-efficacy and scholarly achievement, a series of regression analyses was conducted. Although regression is a common statistical procedure, it is considered a powerful technique for discerning the statistical strength of the relationships between variables.

Results

Direct Effects: Critical-career events and self-esteem on self-efficacy. Based on the results of this study, the evidence that critical-career events and self-esteem directly influences the development of self-efficacy was inconclusive since different critical-career events appeared to be associated with different measures of self-efficacy. The following relationships were found to be statistically significant: 1) the relationship of mentoring to self-efficacy: articles; 2) the relationship of awards and self-esteem to self-efficacy: books: 3) the relationship of growth opportunities and self-esteem to self-efficacy: presentations: and 4) the relationship of awards and growth opportunities to self-efficacy: total.

Direct effects: Critical-career events and self-esteem on achievement. Also, based on the results of this study, the evidence that critical-career events and self-esteem directly influences achievement was inconclusive since different critical-career events appeared to be associated with different measures of achievement. However, the following relationships were found to be statistically significant: 1) the relationship of growth opportunity to achievement: presentations; and 2) the relationship of growth opportunity to achievement: total.

Indirect effects: Critical-career events and self-esteem, via self-efficacy, on achievement. Based on the results of this study, the evidence that critical-career

events indirectly influences achievement was inconclusive since different critical-career events and measures of self-efficacy appeared to be associated with different measures of achievement. The following relationships were found to be statistically significant: 1) the relationship of self-efficacy: presentation to achievement: presentation; and 2) the relationship of growth opportunity and self-efficacy: total to achievement: total.

Reduced regression model. Finally, regressing only those variables which were determined to be significant in previous analyses (mentoring, awards, growth opportunities, self-esteem, and self-efficacy: total), the following relationship was found to be statistically significant: the relationship of growth opportunities and self-efficacy: total to achievement: total.

Summary

Questions regarding the effects of a turbulent environment on the academic health of this nation must be addressed. Since institutional excellence is, in part, a function of productive faculty, the process of scholarly career development needs to be more fully understood. Aimed at deducing the effects of professional socialization processes, this study led to the development of inferences and, could possibly lead to the development of interventions designed to enhance the education and scholastic career development of tomorrows leaders.